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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,532	10/11/2005	Yasushi Hayashi	MAT-8748US	4368
53473	7590	06/25/2008		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER BAYOU, AMENE SETEGNE	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 06/25/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/552,532

**Applicant(s)**

HAYASHI, YASUSHI

**Examiner**

AMENE S. BAYOU

**Art Unit**

3746

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/11/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. Figure 5 should be designated by a legend such as --Prior Art--because the figure is admitted as prior art in the disclosure and only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

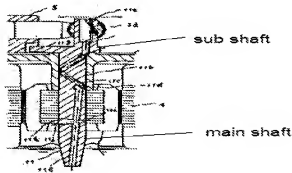
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 7 are rejected under 35 U.S.C. 103(a) as being as being unpatentable over Nobuo et al. (Japanese patent publication number S62-44108) in view of Goodnight (US patent number 6457561B1).

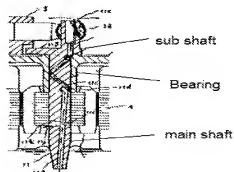
4 In re claim 1, Nobuo et al.' 108 disclose lubrication system for hermetic compressor including:

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- Electric compressor ,in figure 1 and 2 ,comprising :a single phase induction motor (4) formed of stator and rotor
- A compressing mechanism (5) driven by the motor (4)
- A hermetic container (2) for accommodating the motor (4) and the compressing mechanism (2) and for pooling lubricant (7)
- A shaft having a main shaft and sub shaft (shown below)

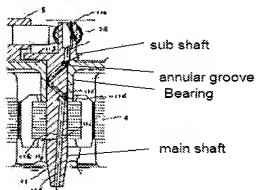


- A cylinder (5) for forming a compressing chamber
- A bearing (shown below) for supporting the main shaft



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- A centrifugal pump (11) opening into the lubricant (7)
- A forward leading groove (11c) engraved on an outer wall of the main shaft and having a first end communicating with the centrifugal pump (11a) and a second end communicating with an annular lubricant groove (shown below) provided on an upper end of the bearing. Please also note that the applicant admitted the annular lubricant groove as prior art in page 1 line 24.



- A vertical hole (11f) bored in the sub shaft and having a first end communicating with the annular lubricant groove and a second end opening into the hermetic container .

But Nobuo et al.' 108 fails to disclose:

- A reverse leading groove having a lead directing in an opposite direction to that of the forward leading groove .

However, Goodnight' 561 teaches a lubrication system for hermetic compressor including:

- A reverse leading groove (42) or having a lead directing in an opposite direction to that of the forward leading groove (42), in figure 7-9 and columns 3, line 39-50 and column 7, lines 7-11 .

5 . It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the compressor of Nobuo et al.' 108 by adding a reverse leading groove as taught Goodnight'561 in order to ensure lubrication during reverse rotation of the compressor. Also since Nobuo et al.' 108 already disclosed forward leading groove having a first end communicating with the centrifugal pump and a second end communicating with an annular lubricant groove making the reverse leading groove first end communicating with the centrifugal pump and a second end communicating with an annular lubricant groove is a mere duplication.

6. In re claim 2 Nobuo et al.' 108 in view of Goodnight'561 as applied to claim 1 disclose the claimed invention:

Goodnight'561 disclose:

- The reverse leading groove (42) of which first end communicates with the centrifugal pump (36) via a thinner section (46) of the shaft formed at the intermediate section of the shaft, in figure 6.

7. In re claim 3 Nobuo et al.' 108 in view of Goodnight'561 as applied to claim 1 disclose the claimed invention:

Goodnight'561 disclose:

- Cross-sectional area of the reverse leading groove is smaller than that of the forward leading groove, in column 7, lines 10-11 and line 35-

38. Please note that such choice of different areas would be an obvious design choice in order to vary the flow rate in the forward and reverse leading grooves.

8. In re claim 4 Nobuo et al.' 108 in view of Goodnight'561 as applied to claim 1 disclose the claimed invention:

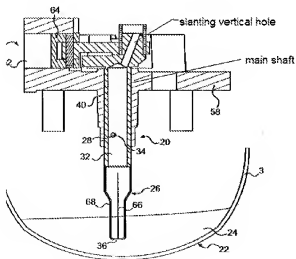
Goodnight'561 disclose:

- Lead of the reverse leading groove is greater than that of the forward leading groove in column 7, lines 10-11 and line 35-38.

9. In re claim 5 Nobuo et al.' 108 in view of Goodnight'561 as applied to claim 1 disclose the claimed invention:

Goodnight'561 disclose:

- A vertical hole slants with respect to a shaft center of the main shaft such that an upper section of the vertical hole slants outward, in figure 2.



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10. In re claim 6 Nobuo et al.' 108 in view of Goodnight'561 as applied to claim 1 disclose the claimed invention:

Goodnight'561 disclose:

- Crossectional area of the reverse leading groove is smaller than that of the forward leading groove, in column 7, lines 10-11 and line 35-38. Please note that such choice of different areas would be an obvious design choice in order to vary the flow rate in the forward and reverse leading grooves.

11. In re claim 7 Nobuo et al.' 108 in view of Goodnight'561 as applied to claim 1 disclose the claimed invention:

Goodnight'561 disclose:

- Lead of the reverse leading groove is greater than that of the forward leading groove in column 7, lines 10-11 and line 35-38.

### ***Response to Arguments***

12. Applicant's arguments, see page 3, lines 19-31 and page 4, lines 1-7, filed on April 8, 2008, with respect to the rejection(s) of claim(s) 1, 2, 5 under 35 USC 102 (b) and claims 3, 4, 6, 7 under 35 USC 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Japanese patent publication number JP 62-44108 B to Nobuo et al. and US patent number 6457561 to Goodnight. The prior arts used to make the new grounds of rejection addresses all of applicant's arguments. Nobuo et al '108 disclose a groove that communicates with an annular lubricant groove



provided on an upper end of the bearing (This is admitted as prior art by the applicant in page 1 of the disclosure). Goodnight '561 discloses a reverse leading groove having a lead directing in an opposite direction to the forward leading groove.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shin (US patent number 20050115771) discloses hermetic compressor. Wallis (US patent number 5038891) discloses hermetically reciprocating compressor. Noguchi et al (US patent publication number 20030161741) disclose closed type hermetic compressor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amene S. Bayou whose telephone number is 571-270-3214. The examiner can normally be reached on Monday-Thursday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art  
Unit 3746